85-9-4/33

To Meet the 40th Anniversary of the Great October Revolution (Cont.)

3) A letter from Tushino, signed by N. Pryakhina and entitled "Five Records" (Pyat' rekcrdov), which narrates how the author, a parachutist, succeeded to achieve in the year 1957 five different records.
4) A letter from Orsk (Chkalovskaya Oblast', RSFSR), signed by P. Vanin and entitled "Parachutists' Circles in Virgin Lands" (Kruzhki Parashyutistov na Tseline), which deals with the organization of the training of young parachutists in the region. The article contains no data of scientific interest. One photo.

AVAILABLE: Library of Congress

Card 2/2

RYABOV, N., tekhnik po spetsial'nomu primeneniyu aviatsii.

Chemical weeding of flax by airplane. Grazhd. av 15 no.5:31
My '58. (MIRA 11:5)
(Aeronautics in agriculture)

RYABOV, M.

Industrial activity of educational institutions. Prof.-tekh. obr. 13 no.10:21-23 O '56. (MIRA 9:11)

1. Zamestitel' nachal'nika Proizvodstvenno-tekhnicheskogo upravleniya Glavnogo upravleniya trudovykh rezervov.
(Technical education)

SOV/84-58-5-30/57

AUTHOR: Ryabov, N., Technician in Special Purpose Aviation (Kalinin)

TITLE: Chemical Weeding of Flax by Aircraft (Aviatsionno-khimicheskaya propolka l'na)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 5, p 31 (USSR)

ABSTRACT: The article reports on experimental weeding operations carried out in the flax fields of a kolkhoz in Bezhetskiy rayon of Kalinin Oblast. A solution of UT-10 preparation was used with satisfactory results. The operations and their economic effect are discussed in some detail.

1. Agriculture 2. Flax--Processing 3. Aircraft--Performance

Card 1/1

DESHKO, M., polkovnik; VINNIKOV, V., podpolkovnik; RYABOV, N., podpolkovnik

"Tactics of small units in modern combat"; discussion of the article published in No.2. Voen. vest. 43 no.9:34-36 S '63. (MIRA 16:10)

(Tactics)

RYABOV, N., agronom

A model seed growing farm. Nauka i pered. op. v sel'khoz 9 no.10:
10-11 O '59 (MIRA 13:3)
(Stavropol Territory--Seed production)

RYABOV, N. (Odesskaya obl.)

Activists of a collective farm. Voen. znan. 40 no.4:30 Ap '64. (MIRA 17:6)

1. RYABOV, N.

2. USSR 600

4. Russia - Industries

7. Achievements of socialist industry, Rabotnitsa, 30, No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

RYABOV, N.

Ryabov, N. and Shteyn, M. - "An outstanding Russian seafarer", (On the 300th anniversary of the campaign of S. Dezhnev), Dal'niy Vostok, 1948, No. 6, p. 93-97.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

RYABOV, N.A., vrach; VARIN, I.Ye., vrach; ARKHANGEL'SKIY, V.N., prof.; LYUBOTSKAYA-ROSSEL'S, Ye.M., vrach; BELETSKIY, V.G., dotsent (Smolensk); UKRAN, M.L., dotsent; USTINOV, S.D., starshiy prepodavatel' gimnastiki

Health hints. Zdarov'e 9 no.2:30-31 F '63. (MIRA 16:3)
(HYGIENE)

RYABOV, N.E.

Simultaneous occurrence of three perforating duodenal ulcers and of an acute phlegmonous appendicitis. Zdrav. Belor. 5 no.4:57-58 Ap '59. (MIRA 12:7)

1. Glavnyy vrach i zaveduyushchiy khirurgicheskim otdeleniyem Nesvizhskoy rayonnoy bol'nitsy.
(DUODENUM--ULCERS) (APPENDICITIS)

RYABOV, Nikolay Flegontovich; KOPTEVSKIY, D.Ya., redaktor; OSTRIROV, N.S., tekhnicheskiy redaktor

[Repair of industrial equipment] Remont promyshlennogo oborudovaniia. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 275 p. (MLRA 9:9)

(Machinery--Maintenance and repair)

MAKIYENKO, Nikolay Ivanovich; KROLIK, Z.M.; OSTAPENKO, N.N.; PESHKOV, Ye.O.;
RYABOV, N.F.; YUDIN, S.T.; DUBROVSKIY, V.A., redaktor; FEDOTOVA, A.F., tekhnicheskiy redaktor

[Machine-shop practice and fundamental knowledge of materials]
Slesarnoe delo s osnovami materialovedeniia. Izd. 2-oe. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 414 p. (MIRA 9:10)
(Machine-shop practice)
(Agricultural machinery--Repairing)

STARICHKOV, Vladimir Semenovich; OSTROVA, I.M., red.; MALINOVSKIY, Yu.F., red.; RYABOV, N.F., nauchnyy red.; PERSON, M.N., tekhn. red.

[An aid for the master machinist]V pomoshch' masteru-slesariu; (al'bom). Moskva, Proftekhizdat, 1961. 225 p. (MIRA 15:8)

(Metal cutting)

RYABOV, N.I., podpolkovnik meditsinskoy sluzhby; SAKOVICH, O.S., mayor meditsinskoy sluzhby

Repellent and acaricide action of kiuzols on Siberian ticks and mosquitoes. Voen.-med. zhur. no.7:50-53 Jl '61. (MIRA 15:1)
(INSECT BAITS AND REPELLENTS)
(TICKS) (MOSQUITOES—EXTERMINATION)

SAFRONOV, Fedot Grigor'eyvich, kandidat istoricheskikh nauk; [redacted], nauchnyy redaktor; SHTEYN, M.G., nauchnyy redaktor; TSYBYKTAROVA, D.S., redaktor; KAYDALOVA, M.D., tekhnicheskiy redaktor

Erofei Pavlovich Khabarov. [Khabarovsk] Khabarovskoe knizhnoe izd-vo, 1956. 31 p. (MIRA 10:7)
(Khabarov, Erofei Pavlovich, 17th cent.)

RYABOV, N. I.

Ryabov, N. I. and Shik, Ya. L. "On roentgenologic localization of deeply imbedded foreign matter in the region of the humerus and pelvic girdle," Trudy Leningr

SO: U-3050, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949)

RYABOV, N. I.

Ryabov, N. I. "Test of roentgenologic study of clinical and experimental acute intestinal impassability," Trudy Lenigr. obl. gospitalya dlya lecheniya invalidov Otechestv. voyny, Leningrad, 1948, p. 134-46

SO: U-3050, 16 June 53, (Letopsis 'Zhurnal 'nykh Statey, No. 5, 1949)

RYBAKOV, N.I.

Biological experiments with rockets and artificial earth satellites. Biol.v shkole no.1:74-81 Ja-F '60. (MIRA 13:5)

1. Institut eksperimental'noy biologii Akademii meditsinskikh nauk SSSR.

(Space biology)

RYABOV, N. I.

May/Jan 48

USSR/Medicine - Zoology
Medicine - Hibernation

"The Biology of the Trans-Baykal Marmota Sibirica Radde During the Winter Period," N. I. Ryabov, 12 pp

"Zool Zhur" Vol XXVII, No 3

Reports observation on subject. Marmots hibernate, period varying from 13-36 days. Exit to lair is blocked by a "stopper," average length of which is 2.24 meters, thus preserving mean temperature at + 6.2°C. Stomach and bowels are empty during hibernation but spermatogenesis takes place in males. Fleas multiply during winter period.

6/49T70

FDB

RYABOV, N.N.

TARASEVICH, Yuriy Sergeyevich; YAVOYSH , Eduard Ivanovich; RYABOV, N.N., inzh., retsenzent; SMIRNOV, B.V., inzh., red.; MOROZOVA, M.N., red. izd-va; EL'KIND, V.D., tekhn.red.

[Tolerances, fits and technical measurements] Dopuski, posadki i tekhnicheskie izmereniia. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 159 p. (MIRA 11:3)
(Tolerance (Engineering)) (Measuring instruments)

USSR / Cultivated Plants. Fruit Trees. Small Fruit Plants. Nut Trees. Tea. M

Abs Jour	: Ref Zhur - Biologiya, No 6, 1959, No. 25023
Author	: Ryabov, N. N.
Inst	: Not given
Title	: Concerning the Division Into Districts of Horticultural Crop Varieties
Orig Pub	: Vinogradarstvo i sadovodstvo Kryma, 1957, No 2, 16-20
Abstract	: Characteristics of old pip-fruit varieties, according to yield, frost-resistance and percent correlation of each variety over three zones of Crimea are presented. It is recommended to include in the standard specifications a number of new varieties in the Crimean ZOS [Ground Aids to Navigation]:

Card 1/2

RYABOV, N.N.

Overall automation of part machining in mass production. Biul. tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.12:91-94 '63. (MIRA 17:3)

RYABOV, N.N.

PHASE I BOOK EXPLOITATION 365

Tarasevich, Yuiry Sergeyevich, and Yavoysh, Eduard Ivanovich

Dopuski, posadki i tekhnicheskiye izmereniya (Tolerances, Fits and Technical Measurements) Moscow, Mashgiz, 1957. 159 p. 20,000 copies printed.

Reviewer: Ryabov, N. N., Engineer; Ed.: Smirnov, B. V., Engineer; Ed. of Publishing House: Morozova, M. N.; Technical Ed.: El'kind, V. D.; Managing Ed for literature on metal working and tool making (Mashgiz): Beyzel'man, R. D.

PURPOSE: The book is designed to serve as a textbook in technical schools; it was approved by the Learned Council of the Main Administration for Labor Reserves under the Council of Ministers of the USSR. It can also be used by workers in the machine-building industry.

COVERAGE: The book outlines the basic principles of accuracy of mated parts; it describes the tolerances and fits required in designing and manufacturing machinery. The methods of measurement used in the machine-building industry are discussed, and the designs and

Card 1/8

Tolerances, Fits and Technical Measurements 365

kinematics diagrams of various apparatuses for inspection and engineering measurement are given. Activity in this field is in line with the modern trend in machine building toward complete replaceability of parts. The authors make reference to Shelaumov, P. M., Engineer, who in 1919 suggested a system of tolerances and fits; they mention Prof. Gattsuk, A. D., under whose guidance the Committee of Standards (KES) developed the first system of tolerances and fits. This system was approved in 1929 by the Committee of Standardization under the Council of Labor and Defense on the recommendation of Prof. Saverin, M. A., chairman of a special commission, and was subsequently put into general use; it is now known as the All-Union Standard (OST). There are 29 references, all of which are Soviet.

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6/27/58

Card 8/8

RYABOV, N.N.

Over-all automation of the machining of body parts in mass production. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 16 no.6:89-92 '63. (MIRA 16:8)
(Automobile industry) (Automation)

RYABOV, N.N.

New structural materials used in the manufacture of machinery and peculiarities of their machining. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. no.4:90-94 '62. (MIRA 15:7)
(Machinery industry) (Materials)

RYABOV, N.N.

Machining high-strength and high-viscosity alloys with localized heating. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 16 no.7:77-80 '63. (MIRA 16:8)
(Metal cutting)

RYABOV, N.N.

Promising methods of metal treatment. Biul.tekh.-ekon.inform. no.7:90-94 '61. (MIRA 14:8)
(Metals—Hardening) (Electric welding)
(Ultrasonic waves—Industrial applications)

RYABOV, N.N.

American automatic line for machining body parts. Biul.tekh.-ekon. inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 17 no.1:103-104 '64. (MIRA 17:2)

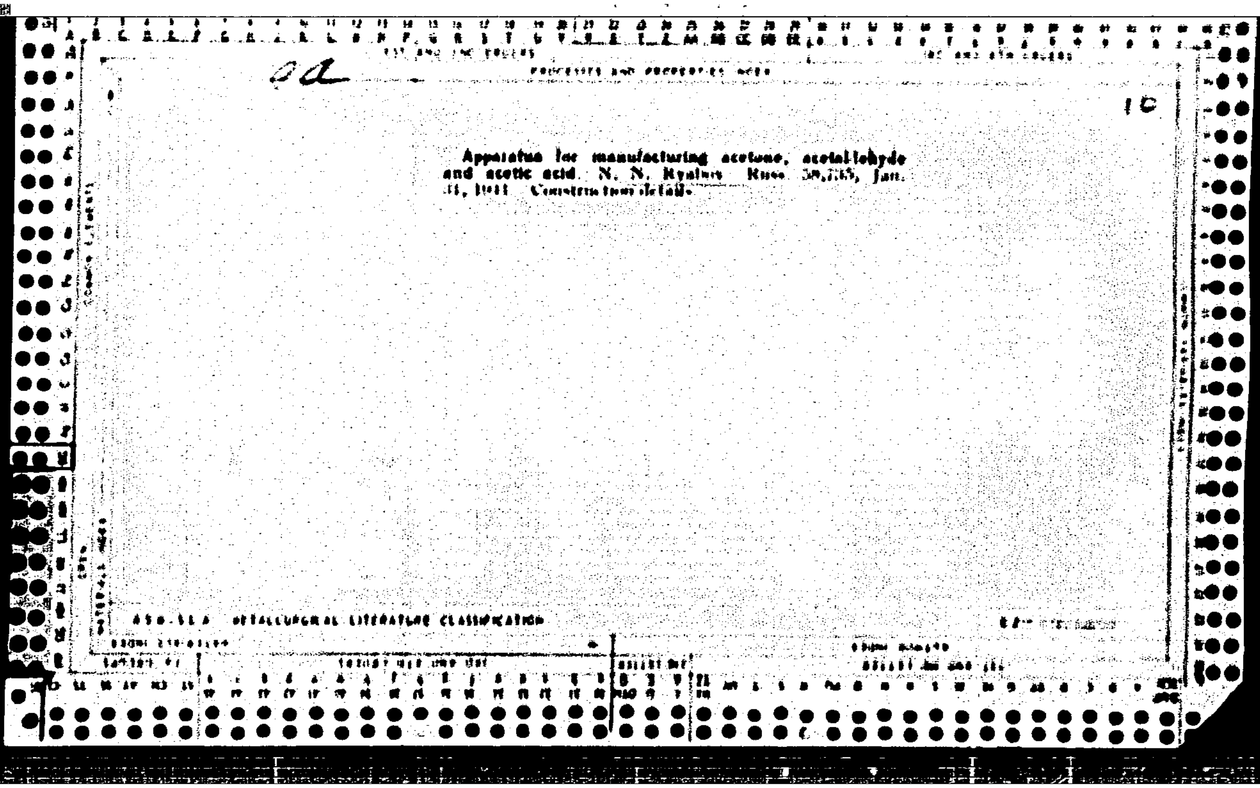
RYABOV, N.N., inzhener, redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Cutting of metals and plastic materials; a collection of articles]
Obrabotka metallov i plastmass rezaniem; sbornik statei. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1955. 122 p.
(Metal cutting) (Plastics) (MLRA 9:5)

RYABOV, N. N. ,ed.

Epp.
.R92447

Obrabotka metallov i plastmass rezaniyem; sbornik statey. Processing of metal and plastics by cutting; collected articles. Moskva, Mashgiz, 1955.
122. P. illus., diagrs., tables.
Includes bibliographies.



1ST AND 2ND ORDERS
3RD AND 4TH ORDERS
PROCESSES AND PROPERTIES INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca

1C

Apparatus for manufacturing acetone, acetaldehyde and acetic acid. N. N. Ryabov. Russ. 59,755, Jan. 31, 1941. Construction details.

PROCESSES AND PROPERTIES INDEX

Ca

21

Three-vat apparatus for the preparation of $Ca(OAc)_2$ from wood tar water. N. N. Ryabov. Russ. 58,355, Nov. 30, 1940. Constructional details.

METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Ca

10

Chilling acetylene. N. N. Ryabov. Russ. 59,185, Feb. 28, 1941. C_2H_2-contg. gases obtained by the thermal decompn. from CH_4 are chilled by introduction of H_2O into them in an injector-type app., which serves to supply the mixt. of C_2H_2 and water vapor into the catalytic app. for conversion into Me_2CO, AcH and AcOH.

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Ca

10

Acetone, acetaldehyde and acetic acid. N. N. Ryabov. Russ. 59,009, Feb. 28, 1941. C_2H_2-contg. gases obtained in the thermal decompn. of CH_4 are chilled with H_2O, and catalytically converted under reduced pressure to Me_2CO, AcH and AcOH.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

RYABOV, N.S.; SMIRNOVA, G.N.

Maintenance features of apartment houses built in Vladivostok according to a standard economic plan. Sbor. nauch. rab. DVNIIS no.3:32-39 '62. (MIRA 17:5)

POPOV, V. I.; RYABOV, M. T.

Founding

Preparation of large cores. Lit. proiz., No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress
October 1952 UNCLASSIFIED

RYABOV, N. T. PA 233T54

USSR/Metallurgy - Foundry, Equipment, Processes Jul 52

"Fabrication of Large Cores," V.L. Popov, N. T. Ryabov, Engineers

"Litey Proizvod" No 7, pp 6-8

Describes procedure of making core for casting of 31,000-kg lower portion of steam cylinder. Core, 3,600 mm high with max diam of 3,044 mm and weighing approximately 30 tons, was made in shape of hollow cylinder out of red bricks reinforced with cast-iron rings and faced with layer of specially prepd sand mixt. Twisted strands of straw were inserted between bricks to secure gas permeability of brickwork. 233T54

MARKOV, K.P.; RYABOV, N.V.; STAS', K.N.

Rapid method for estimating the radiation hazard due to the presence of the daughter products of radon in the air.
Atom. energ. 12 no.4:315-319 Ap '62. (MIRA 15:3)
(Radon--Decay)
(Radioactivity--Measurement)

S/089/62/012/004/006/014
B145/B102

217900

AUTHORS: Markov, K. P., Ryabov, N. V., Stas', K. N.

TITLE: Rapid method of estimating radiation hazard associated with the presence of radon daughters in the air

PERIODICAL: Atomnaya energiya, v. 12, no. 4, 1962, 315 - 319

TEXT: A method is given for simultaneously determining the atmospheric Ra A concentration and the latent energy as defined by H. Kusnetz. These two quantities characterize with sufficient accuracy the radiation hazard to the upper respiratory tracts and to the pulmonary tissue as a whole. The air to be examined was blown through a filtering tissue. $N_\alpha(t) = v\eta\sum_{j=1}^{3} C_j^* q_j$, where $C_j^* = C_j \cdot 222 \cdot 10^{10}/\lambda_j$ and $C_j = f(\lambda, \tau, t)$, is obtained for the α-activity of the sample accumulated on the filter after the air had been blown through (v = velocity of the air flow in liters/min, η = efficiency of filtering with respect to the daughters, λ_1, λ_2, λ_3 = decay constants of radium A, B, and C, respectively, in min^{-1}, q_j = concentration

Card 1/3

of the daughters in the air in curies per liter, τ = time of air blowing, $t = 0$ corresponds to the end of blowing). A diagram, $C_j^* = f(t)$ $(j = 1,2,3)$, shows that the changes with time of C_2^* and C_3^* compensate during the first minutes, and that $N_\alpha(t_1) - N_\alpha(t_2) = \eta v [C_1^*(t_1) - C_1^*(t_2)] q_1$. When measuring the total number $n_\alpha(t,\Delta t)$ of the pulses in the time interval $\Delta t = 3$ min beginning with $t_1 = 1$ min and $t_2 = 7$ min at $\tau = 5$ min (at these values, the highest methodical and statistical accuracy of determination is obtained) $q_1 = 1.23 \cdot 10^{-13} (n_1 - n_2)/\varepsilon\eta v$; $n_1 = n_\alpha(1;3)$, $n_2 = n_\alpha(7;3)$ is obtained from Eq. (5) (ε = efficiency of α-radiation recording). If the factor 1.23 is replaced by 1.18, the methodical error decreases from 20 to 15%. $E_\alpha = 40 n_2/\varepsilon v\tau = k n_2$ is obtained for the latent energy E_α (in Mev). The methodical error due to the dependence of k on the degree of equilibrium of the daughters does not exceed 15%. At a rate of air blowing of 20 - 25 liters/min (this corresponds to the capacity of the blowing machine ПРВ-1 (PRV-1)) and an efficiency of α-ray recording of 20% the atmospheric Ra A concentration measured was $5\cdot10^{-12}$ curies/liter, the total error (methodical + statistical) was below 50%. The latent energy was 0.05 of the admissible limit with a total error below 30%. The advantages of the method are its rapidity (15 min), high sensitivity, and sufficient accuracy. There are 1 table, 1 figure, and 6 references: 3 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: Ref. 1:H. Kusnetz. Amer. Industr. Hyg. Assoc. Quart., 17, 85 (1956); E. Tsivoglou et al. Nucleonics, 14, no. 9, 40 (1953); M. Chamberlain, E. Dyson. Brit. J. Radiol., 29, no. 342, 317 (1956).

SUBMITTED: April 27, 1961

Card 3/3

L 38810-66 EWT(m)/T WW/DS

ACC NR: AR6021028 SOURCE CODE: UR/0058/66/000/002/A076/A076

AUTHOR: Markov, K. P.; Ryabov, N. V.; Stas', K. N.

TITLE: Calculation of methodological errors in the determination of the value of the "latent energy"

SOURCE: Ref. zh. Fiz, Abs. 2A572

41
B

REF SOURCE: Tr. Soyuzn. n.-i. in-ta proborostr., vyp. 2, 1965, 83-88

TOPIC TAGS: Alpha particle, radon, Alpha decay, Beta decay, radioactivity measurment, radioactive aerosol

ABSTRACT: The "latent energy" E_α is the total energy of the α particles of all the daughter products of radon, up to RaD, contained in 1 liter of air. This quantity E_α turned out to be useful for monitoring the content of short-lived radon decay products in air. In determining the value of E_α from results of measurements of α and β activity of the disperse phase of aerosols settling on a filter, an uncertainty arises, connected with the dependence of the corresponding coefficients for the conversion from the relative content of RaA, RaB, and RaC in air. The authors present a derivation and a description of a nomogram which makes it possible to estimate rapidly the error in the determination of the value of E_α from the results of measurements of the α and β activity (N) of the filter, resulting from the dependence of the conversion coefficient relating N with E_α and the ratio of the concentrations of RaA, RaB, and RaC. V. Kharitonov. [Translation of abstract]

SUB CODE: 20

Card 1/1

L 3722-66 EWT(m)/EWA(h)

ACCESSION NR: AT5022117

UR/3157/64/000/105/0003/0009
541.182.2/.3.083:539.16:546.296

AUTHORS: Markov, K. P.; Ryabov, N. V.; Stas', K. N.

29
B+1

TITLE: Monitoring the content of short-lived daughter products of radon in the atmosphere of uranium mines
27

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. /Doklady/, no. 105, 1964. Kontrol' za soderzhaniyem v atmosfere uranovykh rudnikov korotkozhivushchikh dochernikh produktov radona; obzor, 3-9

TOPIC TAGS: alpha decay, radon, radiation hazard 19, RANag I measuring device 10

28

ABSTRACT: A survey is made of methods for individual determination of the concentrations of RaA, RaB, and RaC in the air and of methods for determining the "concealed" energy liberated in the total alpha decay of all short-lived daughter products up to RaD. The devices for determining the concentration of daughter products of radon in the air are also surveyed. Methods are being developed for measurement of the concentrations of RaA, RaB, and RaC in the air for research purposes and practical dosimetry, but the most complete representation of the radiation danger due to the presence of short-lived daughter products of radon in the air is given by the "concealed" energy, which is most accurately determined by the

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L 3722-66

ACCESSION NR: AT5022117

0

method proposed by I. I. Gusarov and V. K. Lyapidevskiy (Trudy konferentsii po radiatsionnoy gigiyene, 6-9 Aprelya 1959, Pod. red. N. F. L. Galanin, Izdatel'stvo po radiotekhnicheskoy literature, 1960, p. 116). The soviet device RANag-I, which weighs 8 kg, permits determination of the concentration of daughter products of radon and radon itself in the air. Orig. art. has: 2 formulas.

ASSOCIATION: none

SUBMITTED: 22Sep64

ENCL: 00

SUB CODE: NP

NO REF SOV: 012

OTHER: 004

Card 2/2

L 3723-66 EWT(m)/EWA(h)

ACCESSION NR: AT5022116 UR/3157/64/000/107/0017/0021
621.387.3:541.182.2/.3:66.067.1

24
B+1

AUTHORS: Markov, K. P.; Ryabov, N. V.; Stas', K. N.

TITLE: Determining the representation with respect to time of the readings given by aerosol radiation meters with continuous motion of the filter tape

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. /Doklady/, no. 107, 1964. Otsenka predstavitel'nosti vo vremeni pokazaniy aerozol'nykh radiometrov s nepreryvnym dvizheniyem fil'truyushchey lenty, 17-21

TOPIC TAGS: radiometry, radioactive aerosol

ABSTRACT: A theoretical evaluation of the accuracy of determination results and the delay of reading output with respect to time is given for the case of continuous motion of the filter tape with a smooth variation in the radioactivity concentration. The activity of a segment of filter tape beneath the detector for the case when the concentration $Q_K(t)$ of a short-lived radioactive substance with decay constant λ varies linearly. The nature of the distortions of the curve of the variation in aerosol concentration is shown in Fig. 1 on the Enclosure. It is found that the accuracy of reproduction of changes in the concentration of short-lived aerosols is

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L 3723-66

ACCESSION NR: AT5022116

a function of the rate at which these changes occur. The obtained results can also be used for measuring the concentration of long-lived isotopes. The results should be useful in developing aerosol radiation meters when the conditions of motion of the filter tape are selected. Orig. art. has: 2 graphs, 1 diagram, 5 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 29Sep64

ENCL: 01

SUB CODE: NP

NR REF SOV: 001

OTHER: 000

Card 2/3

L 3723-66

ACCESSION NR: AT5022116

ENCLOSURE: 01

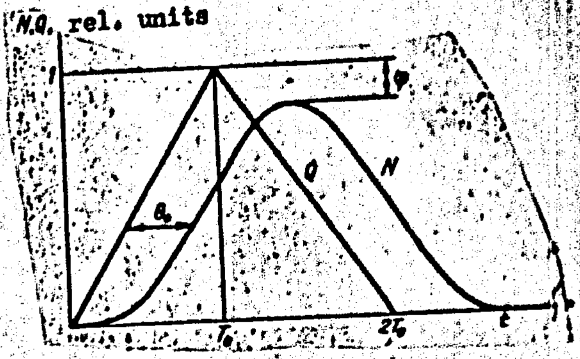

Fig. 1. Nature of distortions of curve of variation in aerosol concentration

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L 5042-66 EWT(m)/EWA(h)
ACCESSION NR: AT5022205 UR/3157/64/000/108/0022/0034
543.275:546.296:66.067.I

AUTHOR: Markov, K. P.; Ryabov, N. V.; Stas', K. N.

30
B+1

TITLE: Method of continuous control of "latent" energy

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Doklady, no. 108, 1964. Metod nepreryvnogo kontrolya velichiny "skrytoy" energii, 22-34

TOPIC TAGS: radioactivity measurement, radioactive aerosol 19

GM

ABSTRACT: The term "latent" energy is used to characterize the radiation hazard caused by air-borne daughter products of radon. The "latent" energy rate is denoted by E_α. Various theoretical problems concerning the design of a proposed device for a continuous control of this rate was analyzed by the authors. Two device versions based on the continuous motion of a filter tape were discussed. In the first version, the detector position coincided with the sample exposure window while in the second version a separate arrangement was considered. The formulas for calculating the number of RaA, RaB and RaC atoms deposited on any surface element of the filter tape was derived. The formulas for alfa-activity were also given for both

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L 5042-66

ACCESSION NR: AT5022205 5

versions. Thus, it was analitically shown that the filter alfa-deposit activity were different in two versions. The equation for E_α was also presented and the necessary conditions for a direct proportionality between the "latent" energy and filter deposit activity were established. These conditions depend upon the selection of a suitable speed rate for moving filter tapes. The problem of possible errors in calculations was examined and the conclusions were drawn that the second version may ensure a reliable control of the radon content in the air. An additional evaluation of this method was made on the basis of preceding works of the same authors and the results were summarized for a better understanding of the whole problem. In conclusion it is stated, that the method in question permits carrying out the E_α measurements with a sufficient statistical accuracy at the energy levels varying rom 6.5×10^2 to 6.5×10^5 Mev/l. Orig. art. has: 2 diagrams and 6 graphs.

ASSOCIATION: None

SUBMITTED: 17Sep64 ENCL: 00 SUB CODE: NP

NO REF SOV: 004 OTHER: 000

Card 2/2

RYABOV, G.A.

Study of the effect of emotive influences on the excitability of the human visual analyzer. Nerv. sist. no.5:111-115 '64.
(MIRA 18:1)

1. Kafedra biofiziki Leningradskogo gosudarstvennogo universiteta.

RYABOV, P., inzhener, glavnyy energetik Leningradskogo kholodil'nika No.6.

Ventilation equipment for the wafer section. Decreasing electric consumption in baking ice cream cones. Khol.tekh. 13 no.3:72-74 Jl-S '53. (MLRA 6:11)
(Bakers and bakeries)

RYABOV,P., inzhener; SLAVYANOVA,T., inzhener

Use of ultroviolet rays for defect detection in the repair of refrigerating equipment. Khol.tekh.32 no.2:64-66 '55. (MLRA 8:10)

(Refrigeration and refrigerating machinery) (Ultraviolet rays)

RYABOV, P.

KRAVCHENKO, S., inzhener; RYABOV, P., inzhener.

Defrosting butter in a high-frequency electric field. Khol.tekh.
34 no.2:48-49 Ap-Je '57. (MIRA 10:10)
(Butter) (Induction heating)

RYABOV, P.G., mayor, voyennyy letchik 2-go klassa

A guarantee for the successful interception of aerial targets. Vest. protivovozd.obor. no.12:33-35 D '61. (MIRA 15:3)
(Russia—Air force)

RYANOV, P. I.

"Investigating the Problem of Rational Grouping of the Convective Cluster in Portable Boilers for Drilling," Energet. Byul. No. 8, 1948.

RYABOV, G.I.

23352

Issledovaniye voprosa o ratsional'noy komponovke konvektivnogo puchka v pyeryedvizhnom kotlye dlya buryeniya. Energyet. Byullyetyen', 1949, No 8, S. 15-19

So: Letopis' No 34

[illegible], I.

3006. Pruzhinnyy predokhranitel'nyy klapan s vypuskom para cherez trubu. Energet. Byulleten, 1949, No. 10, S. 29

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, 1949

RYZHOV, P. I.

36606. Ryzhov, P. I. Opyt ekspluatatsii peredvizhnykh parovykh kotlov v polevykh usloviyakh. Energet. Byulleten', 1949, No. 11, s. 10-14

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

F

22

1141. COMBINED TYPE OF TRANSPORTABLE BOILER. Ryabov, Kl
(Za Ekon. Topliva (Fuel Econ.) Mar. 1950, (3), 19-26).
An account of seven existing types of transportable boiler
and an illustrated description and test results of an
improved "combined" type. This is a small vertical shell
type boiler with cross tybes. In addition to horizonatl
cross tuves there is a row of water tubes starting from the
back of the firebox opposite the fire door and rising first
diagonally then vertically to the top of the firebox. The
lower portions of these tubes are joined together to form a
baffle which diverts the hot gases upwards on their way toa
low horizontal exit at the back of the boiler. The gases
them pass to the smoke stack through a water preheater which
resembles a vertical fire tube boiler. The boiler is claimed
to be efficient, easy to manufacture and foolproof, with
all tubes accessible for mechanical scaling. (L)

METALLURGICAL LITERATURE CLASSIFICATION

RYAbov, P.I.

USSR/Engineering - Steam boilers

Card 1/1 Pub. 77 - 17/20

Authors : Ryabov, P. I., Cand. Tech. Sci.

Title : Steam boilers on wheels

Periodical : Nauka i zhizn' 21/12, page 40, Dec 1954

Abstract : Specification and description are given of special mobile boilers for use at temporary stations to furnish steam for engines driving machinery or generators or simply for heating. Illustration.

Institution : ...

Submitted : ...

RYABOV, Petr Ivanovich; KARKLIN, K.M., red.; VORONIN, K.P., tekhn.red.

[Mobile steam boilers] Peredvizhnye parovye kotly. Izd.2., perer. Moskva, Gos.energ.izd-vo, 1960. 334 p. (MIRA 13:5)
(Boilers)

KONDRAT'YEV, Afanasiy Borisovich, kand.tekhn.nauk; YERSHOVA, Galina Nikolayevna, inzh.; MEN'SHIKOV, Ivan Alekseyevich, prof., doktor tekhn.nauk; MOSKOVSKIY, Mikhail Ivanovich, kand.tekhn.nauk; SOBOLEV, David Iosifovich, kand.tekhn.nauk; SMIL'GEVICH, Petr Kazimirovich, inzh.; SHIROKOV, Boris Ivanovich, kand.sel'skokhoz.nauk; Prinimali uchastiye: TREBIN, Boris Nikolayevich, inzh.; OSOBOV, Vadim Izrailevich, inzh. BRIK, P.A., prepodavatel', retsenzent; IVANOV, V.A., prepodavatel', retsenzent; KOGANOV, A., prepodavatel', retsenzent; KONONOV, B.V., prepodavatel', retsenzent; MARKOV, G.Ya., prepodavatel', retsenzent; OSIPOV, G.P., prepodavatel', retsenzent; RYABOV, P.I., prepodavatel', retsenzent; SOLOV'YEV, K.Ya., prepodavatel', retsenzent; SOROKIN, V.Ya., prepodavatel', retsenzent; BANNIKOV, P., red.; VORONKOVA, Ye., tekhn.red.

[Manual for collective farm machinery operators] Spravochnik mekhanizatora sel'skogo khoziaistva. Penza. Penzenskoe knizhnoe izd-vo, 1959. 610 p. (MIRA 14:2)

1. Saratovskiy institut mekhanizatsii sel'skogo khozyaystva imeni M.I.Kalinina (for Brik, Ivanov, Koganov, Kononov, Markov, Osipov, Ryabov, Solov'yev, Sorokin).
(Agricultural machinery) (Farm mechanization)

RYABOV, P.I., kandidat tekhnicheskikh nauk (Moskva)

Mobile disinfection and shower installations. Fel'd.i akush.
no.7:Jl' '55. (MLRA 8:10)
(ANTISEPSIS AND ASEPSIS, appratus and instruments
itinerant disinfect.and shower installations with
hot air,steam & formalin)
(FORMALDEHYDE
disinfection, with hot air & steam in itinerant
disinfection & shower installations)
(STEAM,
disinfection, with farmaldehyde & hot air in itinerant
disinfection & shower installations)

RYABOV, P.I., inzhener-polkovnik, kandidat tekhnicheskikh nauk

The "DDP" disinfection chamber and shower on a single-axis trailor. Voen-med. zhur. no.2:68-72 F '56 (MLRA 10:5)

(SANITATION,
mobile disinfection-shower appliance for military use) (Rus)
(ANTISEPSIS AND ASEPSIS, apparatus and instruments,
same)

RYABOV, P.I.

Mobile shower units. Vod. i san. tekh. no.2:21-26 F '57.
(Shower baths) (MIRA 10:6)

RYABOV, P.I., inzh.-polkovnik, kand. tekhn. nauk

Sterilization and disinfection apparatus on a two-wheel. Voen. med. zhur. no.2:87-90 F '57 (MIRA 12:7)

(ANTISEPTIS AND ASEPSIS,
sterilization-disinfect. appar. on trailer (Rus))

RYABOV, Petr Ivanovich, kand.tekhn.nauk, starshiy nauchnyy sotrudnik.
Prinimala uchastiye: RYABOVA, L.P.. CHERNIKOV, A.P., red.;
NOVIKOV, Yu.V., red.; SENCHILO, K.K., tekhn.red.

[Field sanitation engineering] Polevaia sanitarnaia tekhnika.
Izd.2., perer. i dop. Moskva, Gos.izd-vo med.lit-ry, 1959.
454 p. (MIRA 12:7)

(Sanitary engineering)

RYABOV, P.N.

Fuel cells. Khim.i tekh.topl. i masel 5 no.6:69-71 Je '60.
(MIRA 13:7)

(Fuel cells)

VOL'FSON, Samuil Vol'fson; RYABOV, P.N., ved. red.; STAROSTINA, L.D., tekhn. red.

[Air and steam method of removing coke from petroleum refinery furnaces] Parovozdushnyi sposob udaleniia koksa iz pechei neftepererabatyvaiushchikh zavodov. Moskva, Gostoptekhizdat, 1963. 51 p. (MIRA 16:9)
(Petroleum refineries--Equipment and supplies)
(Coke)

RUDAKOVA, Nina Yakovlevna; TIMOSHINA, Anna Vasil'yevna; CHEREPNEVA, Yekaterina Ivanovna; AL'TSHULER, A.Ye., retsenzent; GOLOMSHTOK, I.S., retsenzent; RYABOV, P.M., red.; YENISHERLOVA, O.M., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Production of paraffin] Proizvodstvo parafina. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 130 p. (MIRA 13:3)

(Paraffins)

SOV/65-59-7-1/12

AUTHOR: Ryabov, P.N.

TITLE: Main Direction for Technical Progress (Glavnoye napravleniye tekhnicheskogo progressa)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 7, pp 1-3 (USSR)

ABSTRACT: The author discusses mechanization and automation in the oil, gas, oil-refining and petrochemical industries in the light of decisions of the 21st Congress of the KPSS (CPSU). He considers these industries particularly suitable for complex automation. The introduction of new methods has already produced considerable improvements in labour productivity, eg a 33% increase in oil-refining in 1955-1957 was accompanied by a 2.5% decrease in the labour force. The level of automation and mechanization, however, remains low. The introduction of complex automation will require new instruments: for determining the fractional composition of light petroleum products, colour measurement, specific-gravity elements, infra-red analysers for hydrocarbons, viscosimeters, level detectors and regulators for operation under pressure. Computer construction

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SOV/65-59-7-1/12

Main Direction for Technical Progress

should be accelerated so that programmed control could be incorporated at works now building.

Card 2/2

RYABOV, Pavel Nikolayevich, khudozhnik

Tales told by stones. IUn.tekh. 4 no.7:43-46 Jl '60.
(MIRA 13:9)

(Art, Primitive)

RYABOV, R. A.

RYABOV, R. A.: "The diffusion of hydrogen in steel at high temperatures." Min Higher Education USSR. Ural Polytechnic Inst imeni S. M. Kirov. Sverdlovsk, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Knizhnaya letopis', No 23, 1956

AUTHOR: Ryabov, R.A. and Gel'd, P.V. 132

TITLE: Influence of the decomposition of austenite on the speed of diffusion of hydrogen in steel. (Vliyanie raspada austenita na skorost' diffuzii vodoroda v stali.)

PERIODICAL: "Fizika Metallov i Metallovedenie" (Physics of Metals and Metallurgy), 1957, Vol.IV, No.1 (10), pp.189-190 (U.S.S.R.)

ABSTRACT: The results described in this paper confirm the hypothesis that in graphs characterising the temperature dependence of the diffusion speed of hydrogen in various steels anomalous sections will exist, due to the fact that diffusion is a structurally-sensitive process, which will be located at temperature ranges at which the speed of decomposition of the austenite reaches high values. The results indicate that the process of elimination of hydrogen from Cr-Ni steels depends to a large extent on the cooling conditions of the metal and particularly on the isothermal holding in the range of the first and second stages of austenite transformation. This fact is of interest in conjunction with the problem of hydrogen brittleness of steel. One graph.

Ural Polytechnical Institute
imeni S.M. Kirov. Recd. June 29, 1956.

РЯБОВ, Р.А.

126-1-40/40

AUTHORS: Gel'd, P. V. and Ryabov, R. A.

TITLE: Speed of diffusion of hydrogen in iron-chromium alloys. (Skorost' diffuzii vodoroda v splavakh zhelezo-khrom).

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.5, No.1, pp. 191-192 (USSR).

ABSTRACT: The kinetic and the energy characteristics of diffusion should depend to a great extent on the forces of partial interaction in the crystal lattice of the alloy. For verifying these assumptions in the case of diffusion of gases in metals, the authors of this paper studied the temperature dependence of the speed of diffusion of hydrogen in alloys of iron with chromium, Si, V and C in the temperature range 300 to 1000°C. The measurements were effected on specimens in the shape of a hollow cylinder whereby the wall thickness was smallest for the part located in the isothermal zone of the furnace. The quantity of hydrogen diffusing across the thin wall and falling into the vacuum system was determined from the increase in pressure inside a calibrated volume. Seven alloys were investigated containing 1, 3, 6, 12, 17, 19 and 28% Cr. The results are graphed in Fig.1 showing the influence of Cr, V, Si and C on the temperature dependence

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of the diffusion speed of hydrogen in the alloys of these elements with iron; this graph also contains results for "Steel 40" (0.4% C). In the temperature range between 300 and 700°C the diffusion speed obeys an exponential law. Near 700°C the curve of the temperature dependence of the diffusion speed has a bend corresponding to phase transformation. In accordance with the diagram of state of the system Fe-Cr such anomalies are observed only on the curves corresponding to the first three of the studied alloys, containing 1, 3 and 6% Cr respectively. The influence of Cr on the diffusion speed of hydrogen has certain particular features. Up to 12% Cr a sharp decrease in the diffusion speed is observed and an increase of the activation energy of the process, whilst for pure iron the activation energy according to numerous authors amounts to 1800 cal/mol. For an alloy containing 12% Cr it reaches the value of 30 000 cal/mol. A further increase of the Cr content in the alloys (up to 28%) has practically no effect on the speed of diffusion. Thereby, the activation energy also ceases to increase. These results are of interest in the light of investigations carried out by G. V. Kurdyumov and his team (Refs.1 and 2). The results obtained by them were also interpreted in terms of interatomic bond forces. They found that the bond forces in Fe-Cr alloys increase with increasing Cr concentration up to 8% Cr. A further increase in the Cr content up to 16% did not bring about an increase in the bond forces. Such analogy of the results definitely indicates that the bond forces between the atoms and the crystal lattice play an important role in the processes of diffusion. This is additionally confirmed by the results of investigation of the diffusion speed of hydrogen in an Fe-V alloy containing 4% V; the activation energy of the diffusion process proved equal (within the limits of experimental error) to the activation energy of pure iron (18 500 cal/mol). Compared with pure iron, the diffusion speed of hydrogen decreased only very slightly. It can be seen from the graph, Fig.1, that the influence of V is less pronounced than the influence of an equivalent quantity of Si and it is also less than the effect of adding 0.4% C to the iron. This is in good agreement with the above mentioned X-ray structural

Speed of diffusion of hydrogen in iron-chromium alloys. 126-1-40/40

investigations (Ref.2) in which it was found that V does not only increase but even weakens to some extent the bonds in the iron lattice.
(Note: This is a complete translation).

There are 1 figure and 2 references, both of which are Slavic.

SUBMITTED: September 28, 1956.

ASSOCIATION: Ural Polytechnical Institute imeni S. M. Kirov.
(Ural'skiy Politekhnicheskiy Institut imeni S.M.Kirova).

AVAILABLE: Library of Congress.

Card 4/4

SOV/126---7-5-16/25

AUTHORS: Ryabov, R. A. and Gel'd, P. V.

TITLE: Relationship Between the Structural and Diffusion Properties of Steels (Svyaz' strukturnykh i diffusionnykh kharakteristik staley)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 5, pp 732-741 (USSR)

ABSTRACT: The authors undertook a detailed study of the dependence of the rate of hydrogen penetration through steel on the conditions under which the second transformation step is brought about. The rate of hydrogen penetration J was determined by measuring the quantity of hydrogen M passing through a flat steel membrane of thickness e and cross-sectional area s in time τ by the formula $J = M/\tau s$ (Ryabov, Ref.5); hence the penetration constant

$$P = Je/\sqrt{p_1}$$

where p_1 is the hydrogen pressure on entering the membrane. An apparatus was used consisting of a hydrogen generator,

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SOV/126---7-5-16/25

Relationship Between the Structural and Diffusion Properties of Steels

a diffusion block with the specimen and a vacuum block for de-gassing the apparatus at the beginning of the experiment as well as for measuring the quantity of hydrogen diffused (Fig.2). The results of the study of steel 37KhN3M which tends to develop the second transformation step are shown in Fig.3. In Fig.4 the influence of temperature on the penetration of hydrogen through the steel 3KhN2M is shown. Measurements were carried out during cooling. In Fig.5 the dependence of hydrogen penetration through steel 9Kh2V on temperature is shown. Measurements were taken during cooling. Fig.6 shows the influence of the temperature from which steel 34KhN2M is cooled on hydrogen penetration. Measurements were carried out during cooling. Fig.7 shows the influence of temperature and thermal history of the specimen on the penetration of hydrogen through steel 20Kh2N4A. Measurements were carried out during cooling. Fig.8 shows isobars of hydrogen penetration through the steel 40KhNMA. The authors arrive at the following conclusions:

1. In temperature ranges in which an intense decomposition of austenite takes place the constant of hydrogen penetration in steel sharply increases with simultaneous decrease in the

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SOV/126---7-5-16/25

Relationship Between the Structural and Diffusion Properties of Steels

activation energy of the process.

2. In different steels the completeness of austenite decomposition in the first step and hence the extent of decomposition in the second step are different and can be determined by the chemical composition of the steel as well as by its cooling rate. These relationships are fully reflected in the curves representing the temperature dependence of the constant of hydrogen penetration through steel. This enables the use of this method for the study of structural transformations in steels on the one hand, and on the other (and this is in practice more important) it enables the influence of various types of thermo-mechanical treatment of steels on their gas saturation to be estimated.

There are 8 figures and 14 references, of which 11 are Soviet, 2 English and 1 German

Card 3/3

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Urals Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: May 17, 1957

137-58-6-13812

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 373 (USSR)

AUTHORS: Gel'd, P.V., Ryabov, R.A.

TITLE: Diffusion of Hydrogen in Alloys of Iron with Silicon (Diffuziya vodoroda v splavakh zheleza s kremniyem)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 67, pp 92-95

ABSTRACT: The influence of Si on the rate of diffusion of H_2(P) in transformer and dynamo steel and also in St-40, 33KhS, and 35KhGSA steel was studied. Curves of the variation of P in relation to temperature in the coordinates P-temp and log P - 1/T°K were plotted. In the latter case, the energy of activation of the process was computed from the slope of the straight line obtained. Within the temperature region of transformation from α into γ the curve shows a break which corresponds to a sharp decrease of P in the region of transformation. It was shown that Si lowers P very strongly. The energy of activation for dynamo and transformer steel increased to 21-22 kcal/mole as against 17-18 kcal/mole for pure Fe. In steels 33 KhS and 35 KhGSA it increased insignificantly while the P of the latter grades of steel is considerably lower than that of St-40 steel.

I.M.

1. Hydrogen--Diffusion 2. Iron silicon--Applications 3. Silicon--Metallurgical effects 4. Diffusion--Temperature facotrs

Card 1/1

137-58-6-11158

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 282 (USSR)

AUTHORS: Ryabov, R.A., Gel'd, P.V.

TITLE: The Rate of Diffusion of Hydrogen Through Structural Steels at Elevated Temperatures (Skorost' diffuzii vodoroda pri vysokikh temperaturakh cherez konstruktsionnyye stali)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 72, pp 160-172

ABSTRACT: A study of the diffusion (D) of H through membranes of steel 40Kh, 34KhM, 35Kh3, 35N3, 40KhNMA, 38KhMYuA, and 40KhN at 300-1000°C. The membrane, a hollow specimen shaped as a complex cylinder, was fastened by Sn soldering onto a gently heated part of the machine. D took place through 1-mm thick walls of a capillary tube. The H_2 pressure which diffused into the vacuum part of the system was measured by a MacLeod manometer. To prevent decarburizing of the specimen, the space between the specimen and the housing of the diffusion block was filled with shavings of the same material. Cr perceptibly impairs D of H in steel. The energy of activation Q in a ferrite-carbide structure (in cal/mol) is 20,500 for 40Kh (0.89% Cr) (for pure Fe Q = 17,000-18,000), in austenite

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137-58-6-13158

The Rate of Diffusion (cont.)

~30,000. For 35Kh3 (2.98% Cr) Q = 24,000-25,000. Ni diminishes D rate of H negligibly. For 35N3 (3.25% Ni) Q = 19,500. The other grades are similar in the diffusion qualities to 40Kh.

Ye.V.

1. Hydrogen--Diffusion 2. Steel--Properties 3. Diffusion--Temperature factors

Card 2/2

SOV/163-58-3-31/49

AUTHORS: Gel'd, P. V., Ryabov, R. A.

TITLE: The Influence Exerted by the Austenite Transformation on the Rate of Penetration of Hydrogen in Steel (Vliyaniye austenitnogo prevrashcheniya na skorost' proniknoveniya vodoroda v stal')

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 189 - 195 (USSR)

ABSTRACT: The rate of the penetration of hydrogen in steel was carefully investigated. It is shown that the rate of the penetration of hydrogen depends on the change of the structure of the steel samples. At temperatures of 400 - 800°C an intense decomposition of austenite takes place in the steel alloy **34KhML**; at the same time the diffusion rate of hydrogen considerably increases and the activation energy drops to $E_a = 18\,500$ cal/mol H_2.

The influence of the temperature on the rate of penetration of hydrogen in the steel alloy **34KhN3M** was found at 660 - 950°. All structural changes in the steel samples were accompanied by the change in the rate of penetration

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The Influence Exerted by the Austenite Transformation on the Rate of Penetration of Hydrogen in Steel SOV/163-58-3-31/49

and the change of the activation energy of hydrogen. In dependence on the processing conditions at higher temperatures different phase diagrams occur which influence the gas saturation of the steel samples. There are 4 figures and 8 references, 6 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

SUBMITTED: December 30, 1957

Card 2/2

RYABOV, R.A., dots., kand.tekhn.nauk; GEL'D, P.V., prof., doktor tekhn.nauk

Effect of temperature and pressure on hydrogen diffusion in steels and iron-base binary alloys. Izv.vys.ucheb.zav.; chern.met. no.9:103-113 S '58. (MIRA 11:11)

1. Ural'skiy politekhnicheskiy institut.
(Iron alloys--Metallography) (Gases in metals)
(Metals, Effect of temperature on)

AUTHORS: Ryabov, R.A., Gel'd, P.V. 32-3-19/52

TITLE: The Determination of the Diffusion Velocity of Hydrogen in Metals (Opredeleniye skorosti diffuzii vodoroda v metallakh)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 3, pp. 306-308 (USSR)

ABSTRACT: The device into which the sample to be investigated is placed has a conical opening into which the neck of the sample fits exactly; it is filled up with lead so that it is hermetically closed. The middle part is heated, whereas the two ends are cooled with water. Hydrogen is fed through the vacuum conduction. For the purpose of measuring pressure changes (diffusion) a Mak-Leod manometer is used. The test sample itself is of a particular cone-like shape; the narrow part contains the capillary through which hydrogen diffuses. Before being measured the samples are investigated in order to find out whether larger pores and/or carbon inclusions exist. Diffusion velocity is calculated according to a formula the derivation of which is given. By means of the device described the number of iron alloys with carbon, chromium, silicon etc. as well as constructional steels are investigated. From the results

Card 1/2

32-3-19/52

The Determination of the Diffusion Velocity of
Hydrogen in Metals

mentioned it may be seen that the diffusion velocity in alloyed steels obeys the law of the square root of hydrogen pressure at low as well as at high temperatures. There are 3 figures, and 8 references, 3 of which are Slavic.

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1. Iron alloys 2. Hydrogen-Diffusion-Velocity

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RYABOV R. A.

ДЕГАЗАЦИЯ СТАЛИ И СПЛАВОВ

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report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow, 30 Jun 1959.